

**WHAT IS CLAIMED IS:**

1. A method of searching for devices automatically in a network, which is characterized in that it includes at least following steps of:

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a. firstly searching, by a device initiating party, whether a resource management device exists in the network when two devices are interconnected; if so, going to step c, otherwise going to step b;

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b. announcing its own device information, by the device initiating party, to all other devices in the network, at the same time, monitoring announcement information of all the other devices; when receiving information of other devices, sending a connection request from the device initiating party to a device requiring connection, and completing corresponding operations after receiving a response;

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c. sending a device searching request from the device initiating party to the resource management device; upon receiving the request, making a search, by the resource management device, among device registration information stored therein; after a device satisfying conditions is found out, information related to that device being immediately sent to the device initiating party, otherwise, informing the device initiating party that the information is not found.

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2. The method according to Claim 1, wherein the step b further includes the step of: after receiving the request of the device initiating party, judging, by a requested party device, whether it is accepted or not; if it is accepted, sending a connection accepted response from the requested party device to the device initiating party and then performing device connecting between these two devices; otherwise, sending a connection rejected response from the requested party device to the device initiating party.

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3. The method according to Claim 1, wherein it further includes the step of: when each device applies to access the network, firstly registering its own device information onto the resource management device and forming a master-slave devices relation with the resource management device.

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4. The method according to Claim 3, wherein it further includes the step of: the resource management device announces its own device information in a multicasting manner, and before the device applying to access makes device registration, it firstly receives the device announcement information of the resource management device.

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